REMARKS/ARGUMENTS

The Office Action mailed July 29, 2004 has been reviewed and carefully considered. Claim 2 is canceled. Claims 1, 3, 5, 7, 12, 14, 17, 19, 24-25, and 27-29 have been amended. Claims 1 and 3-29 are pending in this application, with claims 1, 14, 19, 20, 24, 25, and 29 being the only independent claims. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Applicants express their sincere thanks to the Examiner for taking time to review the present application and cited prior art references during the telephonic interview on November 4, 2004. The subject matter discussed is incorporated in the following remarks.

In the Office Action mailed July 29, 2004, claims 1-2, 19-20 and 25 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,826,201 (Gratias) in view of U.S. Patent No. 6,564,038 (Bethea).

Claims 3-17, 21-24, and 26-29 stand rejected under 35 U.S.C. §103 as unpatentable over Gratias and Bethea in further view of U.S. Patent No. 6,211,671 (Shattil).

Claim 18 stands rejected under 35 U.S.C. §103 as unpatentable over Gratias, Bethea, and Shattil in further view of U.S. Patent No. 6,356,773 (Rinot).

The present invention relates to a device which includes (1) RF circuitry for generating an antenna signal for an antenna and (2) an active shield device which generates a near field based on the generated antenna signal to protect a user from the electromagnetic fields generated by the antenna. Page 4, lines 14-16, of the specification discloses that the antenna 12 is connected to an RF section of the device for receiving an antenna signal, the antenna creating an electromagnetic field in response to the antenna signal. The active shields 14a-14c are radiating devices which substantially cancel or reduce the electromagnetic field created by and emanating

from the antenna 12 (see page 3, line 21 to page 4, line 1). To accomplish the desired effect, the active shields 14a-14c create a near field which is opposite to the field created by the antenna 12 (page 4, lines 5-7). A coupler 20 is connected to the RF section for receiving the generated antenna signal therefrom and diverts a small portion of the antenna signal, i.e., the reduced antenna signal, to the active shields 14a-14c (see page 4, lines 14-16; and Fig. 2). Adjustment circuits 22a-22c are connected between the coupler 20 and the active shields 14a-14c (page 4, lines 17-19). The adjustment circuits 22a-22c create signals based on the antenna signal such that the active fields 14a-14c radiate the near fields to substantially cancel or reduce the electromagnetic radiation from the antenna 12 which is directed toward the user (page 4, line 22 to page 5, line 2).

Each of the independent claims 1, 14, 19, 20, 24, 25, and 29 has been amended to specifically recite that the near field produced by the active shields is generated based on the generated antenna signal, which is generated in the RF circuitry of the apparatus.

Gratias discloses a cell phone with an antenna and a passive shield for reducing radiation in a direction toward the user (see col. 1, lines 47-51, of Gratias). As stated in the Office Action, Gratias does not disclose or teach an active antenna shield including a radiation device for generating a near field.

Bethea discloses a method and apparatus for suppressing interference using active shielding techniques. The objective of Bethea is to reduce the interfering stray signals (col. 3, lines 16-17 of Bethea). According to Bethea, phase shift/null feedback device 300 receives as input an amplified signal 145 and stray signals 115 detected by a sensing antenna 110 (col. 3, lines 21-25). The phase shifter/null feedback device 300 receives the detected stray signal 115, if any, and adaptively adjusts the phase and magnitude of the amplified signal 145 to produce an opposing neutralizing signal 155 such that the detected stray signals 115 and the corresponding opposing

neutralizing signal 155 are approximately 180 degrees out of phase, and of equal magnitude (col. 3, lines 30-36; and col. 3, lines 56-63). There is no teaching or suggestion that the neutralizing signal 155 is generated based on the antenna signal generated by the RF circuitry of the apparatus. Rather, in Bethea the neutralizing signal is generated in response to the stray signals 115 detected by the sensing antenna 110. Accordingly, Bethea fails to teach or suggest an apparatus having active shields that generate a near field based on a generated antenna signal which is generated by RF circuitry of the apparatus, as expressly recited in each of independent claims 1, 14, 19, 20, 24, 25, and 29.

Accordingly, it is respectfully submitted that independent claims 1, 14, 19, 20, 24, 25, and 29 are each allowable over Gratias in view of Bethea.

Shattil fails to teach what Gratias and Bethea lack. Shattil relates to a device having two or more coils for picking up external magnetic flux that induces signals in each of the coils and a cancellation circuit for canceling inductive noise components of the external magnetic flux. In Shattil, an interference-cancellation system for electromagnetic receivers adds a reference signal to a received signal to cancel inductive noise from the received signal (col. 4, lines 51-65).

Inasmuch as Shattil merely teaches adjustment of the signal produced by the received radiation at a receiver, it fails to teach or suggest creating a near field to substantially cancel a magnetic field generated by an antenna in a predetermined region based on a generated antenna signal, as recited in applicants' claims. Accordingly, it is respectfully submitted that independent claims 1, 14, 19, 20, 24, 25, and 29 are allowable over Gratias and Bethea in view of Shattil.

Rinot is directed to a passive shield which absorbs electromagnetic radiation (col. 5, lines 24-25). Accordingly, Rinot likewise fails to teach or suggest the claimed active shield

radiators for creating a near field in response to a generated antenna signal for canceling the electromagnetic field created by the antenna in a predetermined area. The Examiner states on page 11 of the Office Action that col. 4, lines 25-28, of Rinot discloses a plurality of active shields. However, it is respectfully submitted that this section of Rinot discloses only different types of passive shields which may individually be used as shields. Accordingly, independent claims 1, 14, 19, 20, 24, 25, and 29 are allowable over Gratias, Bethea, and Shattil in view of Rinot.

Dependent claims 3-13, 15-18, 21-23, and 26-28, each being dependent on one of independent claims 1, 14, 19, 20, 24, 25, and 29, are deemed allowable for at least the same reasons expressed above with respect to independent claims 1, 14, 19, 20, 24, 25, and 29.

Dependent claims 4 and 5 each recite a coupler "dimensioned and arranged for receiving said antenna signal from said RF circuitry portion and generating a reduced antenna signal, said active shield being dimensioned and arranged to generate the near field in response to the reduced antenna signal." Since neither Gratias, Bethea, Shattil, nor Rinot disclose, teach or suggest generating a near field in response to an antenna signal, they fail to disclose, teach or suggest generating a near field in response to a reduced antenna signal. Accordingly dependent claims 4 and 5 are allowable for at least these additional reasons.

Dependent claims 12, 17, 23, and 28 each recite a feedback circuit for controlling the adjustment circuit, wherein said adjustment circuit is operative to output a signal to said active shield to thereby create the near field based on both said antenna signal and said feedback circuit. While Bethea discloses generating a neutralizing signal in response to a signal received from a sensing antenna, there is no teaching or suggestion for generating a near field in response to both the antenna signal and the feedback signal. The remainder of the references fails to

disclose active shields. Accordingly, it is respectfully submitted that dependent claims 12, 17, 23, and 28 are allowable for at least these additional reasons.

The application is now deemed to be in condition for allowance, and early notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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